RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/531,844_
Source: _PCT/10_
Date Processed by STIC: _4/27/05_

ENTERED

PCT

RAW SEQUENCE LISTING   DATE: 04/27/2005
PATENT APPLICATION: **US/10/531,844**   TIME: 14:38:36

     Input Set : **A:\PTO.SR.txt**
     Output Set: **N:\CRF4\04272005\J531844.raw**

```
   3 <110> APPLICANT: Jahic, Haris
   5 <120> TITLE OF INVENTION: Screening Assay to Identify Inhibitors of the Murd Enzyme
Using an
   6       Activator-Independent Murd Enzyme
   8 <130> FILE REFERENCE: ASZD-P01-874
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/531,844
C--> 10 <141> CURRENT FILING DATE: 2005-04-18
  10 <150> PRIOR APPLICATION NUMBER: GB 0224997.7
  11 <151> PRIOR FILING DATE: 2002-10-26
  13 <160> NUMBER OF SEQ ID NOS: 4
  15 <170> SOFTWARE: PatentIn version 3.2
  17 <210> SEQ ID NO: 1
  18 <211> LENGTH: 463
  19 <212> TYPE: PRT
  20 <213> ORGANISM: Escherichia Coli bacterium
  23 <220> FEATURE:
  24 <221> NAME/KEY: misc_feature
  25 <222> LOCATION: (1)..(3)
  26 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
  28 <220> FEATURE:
  29 <221> NAME/KEY: misc_feature
  30 <222> LOCATION: (46)..(48)
  31 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
  33 <220> FEATURE:
  34 <221> NAME/KEY: misc_feature
  35 <222> LOCATION: (73)..(73)
  36 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
  38 <220> FEATURE:
  39 <221> NAME/KEY: misc_feature
  40 <222> LOCATION: (142)..(143)
  41 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
  43 <220> FEATURE:
  44 <221> NAME/KEY: misc_feature
  45 <222> LOCATION: (154)..(155)
  46 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
  48 <220> FEATURE:
  49 <221> NAME/KEY: misc_feature
  50 <222> LOCATION: (235)..(235)
  51 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
  53 <220> FEATURE:
  54 <221> NAME/KEY: misc_feature
  55 <222> LOCATION: (247)..(249)
  56 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
  58 <220> FEATURE:
```

P.6

RAW SEQUENCE LISTING
PATENT APPLICATION: **US/10/531,844**

DATE: 04/27/2005
TIME: 14:38:36

Input Set : **A:\PTO.SR.txt**
Output Set: **N:\CRF4\04272005\J531844.raw**

```
 59 <221> NAME/KEY: misc_feature
 60 <222> LOCATION: (348)..(349)
 61 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 63 <220> FEATURE:
 64 <221> NAME/KEY: misc_feature
 65 <222> LOCATION: (399)..(400)
 66 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 68 <220> FEATURE:
 69 <221> NAME/KEY: misc_feature
 70 <222> LOCATION: (408)..(409)
 71 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 73 <220> FEATURE:
 74 <221> NAME/KEY: misc_feature
 75 <222> LOCATION: (460)..(463)
 76 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
 78 <400> SEQUENCE: 1
```

```
W--> 80 Xaa Xaa Xaa Met Ala Asp Tyr Gln Gly Lys Asn Val Val Ile Ile Gly
     81 1               5                  10                  15
     84 Leu Gly Leu Thr Gly Leu Ser Cys Val Asp Phe Phe Leu Ala Arg Gly
     85             20                  25                  30
     88 Val Thr Pro Arg Val Met Asp Thr Arg Met Thr Pro Pro Xaa Xaa Xaa
     89             35                  40                  45
     92 Gly Leu Asp Lys Leu Pro Glu Ala Val Glu Arg His Thr Gly Ser Leu
     93       50                  55                  60
     96 Asn Asp Glu Trp Leu Met Ala Ala Xaa Asp Leu Ile Val Ala Ser Pro
     97 65                  70                  75                  80
    100 Gly Ile Ala Leu Ala His Pro Ser Leu Ser Ala Ala Ala Asp Ala Gly
    101             85                  90                  95
    104 Ile Glu Ile Val Gly Asp Ile Glu Leu Phe Cys Arg Glu Ala Gln Ala
    105             100                 105                 110
    108 Pro Ile Val Ala Ile Thr Gly Ser Asn Gly Lys Ser Thr Val Thr Thr
    109             115                 120                 125
    112 Leu Val Gly Glu Met Ala Lys Ala Ala Gly Val Asn Val Xaa Xaa Gly
    113       130                 135                 140
    116 Val Gly Gly Asn Ile Gly Leu Pro Ala Xaa Xaa Leu Met Leu Leu Asp
    117 145                 150                 155                 160
    120 Asp Glu Cys Glu Leu Tyr Val Leu Glu Leu Ser Ser Phe Gln Leu Glu
    121             165                 170                 175
    124 Thr Thr Ser Ser Leu Gln Ala Val Ala Ala Thr Ile Leu Asn Val Thr
    125             180                 185                 190
    128 Glu Asp His Met Asp Arg Tyr Pro Phe Gly Leu Gln Gln Tyr Arg Ala
    129             195                 200                 205
    132 Ala Lys Leu Arg Ile Tyr Glu Asn Ala Lys Val Cys Val Val Asn Ala
    133       210                 215                 220
    136 Asp Asp Ala Leu Thr Met Pro Ile Arg Gly Xaa Ala Asp Glu Arg Cys
    137 225                 230                 235                 240
    140 Val Ser Phe Gly Val Asn Xaa Xaa Xaa Met Gly Asp Tyr His Leu Asn
    141             245                 250                 255
    144 His Gln Gln Gly Glu Thr Trp Leu Arg Val Lys Gly Glu Lys Val Leu
```

```
145               260               265               270
148 Asn Val Lys Glu Met Lys Leu Ser Gly Gln His Asn Tyr Thr Asn Ala
149         275               280               285
152 Leu Ala Ala Leu Ala Leu Ala Asp Ala Ala Gly Leu Pro Arg Ala Ser
153     290               295               300
156 Ser Leu Lys Ala Leu Thr Thr Phe Thr Gly Leu Pro His Arg Phe Glu
157 305               310               315               320
160 Val Val Leu Glu His Asn Gly Val Arg Trp Ile Asn Asp Ser Lys Ala
161             325               330               335
164 Thr Asn Val Gly Ser Thr Glu Ala Ala Leu Asn Xaa Xaa Gly Leu His
165         340               345               350
168 Val Asp Gly Thr Leu His Leu Leu Leu Gly Gly Asp Gly Lys Ser Ala
169         355               360               365
172 Asp Phe Ser Pro Leu Ala Arg Tyr Leu Asn Gly Asp Asn Val Arg Leu
173     370               375               380
176 Tyr Cys Phe Gly Arg Asp Gly Ala Gln Leu Ala Ala Leu Arg Xaa Xaa
177 385               390               395               400
180 Pro Glu Val Ala Glu Gln Thr Xaa Xaa Glu Thr Met Glu Gln Ala Met
181             405               410               415
184 Arg Leu Leu Ala Pro Arg Val Gln Pro Gly Asp Met Val Leu Leu Ser
185         420               425               430
188 Pro Ala Cys Ala Ser Leu Asp Gln Phe Lys Asn Phe Glu Gln Arg Gly
189         435               440               445
192 Asn Glu Phe Ala Arg Leu Ala Lys Glu Leu Gly Xaa Xaa Xaa Xaa
193     450               455               460
196 <210> SEQ ID NO: 2
197 <211> LENGTH: 463
198 <212> TYPE: PRT
199 <213> ORGANISM: Escherichia faecalis bacterium
202 <220> FEATURE:
203 <221> NAME/KEY: misc_feature
204 <222> LOCATION: (200)..(200)
205 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
207 <220> FEATURE:
208 <221> NAME/KEY: misc_feature
209 <222> LOCATION: (261)..(262)
210 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
212 <220> FEATURE:
213 <221> NAME/KEY: misc_feature
214 <222> LOCATION: (348)..(349)
215 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
217 <220> FEATURE:
218 <221> NAME/KEY: misc_feature
219 <222> LOCATION: (365)..(365)
220 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
222 <220> FEATURE:
223 <221> NAME/KEY: misc_feature
224 <222> LOCATION: (380)..(380)
225 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
```

```
227 <400> SEQUENCE: 2
229 Met Lys Lys Ile Thr Thr Tyr Gln Asn Lys Lys Val Leu Val Leu Gly
230 1               5                   10                  15
233 Leu Ala Lys Ser Gly Val Ser Ala Ala Lys Leu Leu His Glu Leu Gly
234             20                  25                  30
237 Ala Leu Val Thr Val Asn Asp Ala Lys Gln Phe Asp Gln Asn Pro Asp
238             35                  40                  45
241 Ala Gln Asp Leu Leu Thr Leu Gly Ile Arg Val Val Thr Gly Gly His
242         50                  55                  60
245 Pro Ile Glu Leu Leu Asp Glu Glu Phe Glu Leu Ile Val Lys Asn Pro
246 65                  70                  75                  80
249 Gly Ile Leu Tyr Thr Asn Pro Leu Val Ala Glu Ala Leu Thr Arg Lys
250                 85                  90                  95
253 Ile Pro Ile Ile Thr Glu Val Glu Leu Ala Gly Gln Ile Ala Glu Cys
254             100                 105                 110
257 Pro Ile Val Gly Ile Thr Gly Thr Asn Gly Lys Thr Thr Thr Thr Thr
258             115                 120                 125
261 Met Ile Gly Leu Leu Leu Asn Ala Asp Arg Thr Ala Gly Glu Ala Arg
262         130                 135                 140
265 Leu Ala Gly Asn Ile Gly Phe Pro Ala Ser Thr Val Ala Gln Glu Ala
266 145                 150                 155                 160
269 Thr Ala Lys Asp Asp Leu Val Met Glu Leu Ser Ser Phe Gln Leu Met
270                 165                 170                 175
273 Gly Ile Glu Thr Phe His Pro Gln Ile Ala Val Ile Thr Asn Ile Phe
274             180                 185                 190
W--> 277 Glu Ala His Leu Asp Tyr His Xaa Gly Ser Arg Lys Glu Tyr Val Ala
278             195                 200                 205
281 Ala Lys Trp Ala Ile Gln Lys Asn Met Thr Ala Glu Asp Thr Leu Ile
282         210                 215                 220
285 Leu Asn Trp Asn Gln Val Glu Leu Gln Thr Leu Ala Lys Thr Thr Ala
286 225                 230                 235                 240
289 Ala Asn Val Leu Pro Phe Ser Thr Lys Glu Ala Val Glu Gly Ala Tyr
290                 245                 250                 255
293 Leu Leu Asp Gly Xaa Xaa Lys Leu Tyr Phe Asn Glu Glu Tyr Ile Met
294             260                 265                 270
297 Pro Ala Asp Glu Leu Gly Ile Pro Gly Ser His Asn Ile Glu Asn Ala
298         275                 280                 285
301 Leu Ala Ala Ile Cys Val Pro Lys Leu Lys Asn Val Ser Asn Ala Gln
302     290                 295                 300
305 Ile Lys Gln Ser Leu Thr Asn Phe Ser Gly Val Pro His Arg Thr Gln
306 305                 310                 315                 320
309 Phe Val Gly Glu Val Gln Gln Arg Arg Phe Tyr Asn Asp Ser Lys Ala
310                 325                 330                 335
313 Thr Asn Phe Leu Ala Thr Glu Met Ala Leu Ser Xaa Xaa Gly Phe Asp
314             340                 345                 350
317 Asn Gln Lys Leu Leu Leu Leu Ala Gly Gly Leu Asp Xaa Arg Gly Asn
318         355                 360                 365
321 Ser Phe Asp Glu Leu Val Pro Ala Leu Leu Gly Xaa Leu Lys Ala Ile
322     370                 375                 380
```

```
325 Val Leu Phe Gly Glu Thr Lys Lys Lys Leu Ala Glu Ala Ala Lys Lys
326 385                 390             395                 400
329 Pro Asn Ile Glu Thr Ile Leu Phe Ala Glu Asn Val Gln Thr Ala Val
330                 405             410                 415
333 Thr Ile Ala Phe Asp Tyr Ser Glu Lys Asp Asp Thr Ile Leu Leu Ser
334                 420             425                 430
337 Pro Ala Cys Ala Ser Trp Asp Gln Tyr Pro Asn Phe Glu Val Arg Gly
338             435             440                 445
341 Glu Ala Phe Met Gln Ala Val Gln Gln Leu Lys Glu Ser Glu Met
342     450                 455                 460
345 <210> SEQ ID NO: 3
346 <211> LENGTH: 463
347 <212> TYPE: PRT
348 <213> ORGANISM: Pseudomonas aeruginosa bacterium
351 <220> FEATURE:
352 <221> NAME/KEY: misc_feature
353 <222> LOCATION: (1)..(2)
354 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
356 <220> FEATURE:
357 <221> NAME/KEY: misc_feature
358 <222> LOCATION: (73)..(73)
359 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
361 <220> FEATURE:
362 <221> NAME/KEY: misc_feature
363 <222> LOCATION: (142)..(143)
364 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
366 <220> FEATURE:
367 <221> NAME/KEY: misc_feature
368 <222> LOCATION: (154)..(155)
369 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
371 <220> FEATURE:
372 <221> NAME/KEY: misc_feature
373 <222> LOCATION: (200)..(200)
374 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
376 <220> FEATURE:
377 <221> NAME/KEY: misc_feature
378 <222> LOCATION: (235)..(235)
379 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
381 <220> FEATURE:
382 <221> NAME/KEY: misc_feature
383 <222> LOCATION: (399)..(400)
384 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
386 <220> FEATURE:
387 <221> NAME/KEY: misc_feature
388 <222> LOCATION: (460)..(463)
389 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
391 <400> SEQUENCE: 3
W--> 393 Xaa Xaa Met Ser Leu Ile Ala Ser Asp His Phe Arg Ile Val Val Gly
394 1             5                 10                 15
```

RAW SEQUENCE LISTING ERROR SUMMARY

PATENT APPLICATION: **US/10/531,844**

DATE: 04/27/2005

TIME: 14:38:37

Input Set : **A:\PTO.SR.txt**

Output Set: **N:\CRF4\04272005\J531844.raw**

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,2,3,46,47,48,73,142,143,154,155,235,247,248,249,348,349

Seq#:1; Xaa Pos. 399,400,408,409,460,461,462,463

Seq#:2; Xaa Pos. 200,261,262,348,349,365,380

Seq#:3; Xaa Pos. 1,2,73,142,143,154,155,200,235,399,400,460,461,462,463

Seq#:4; Xaa Pos. 73,142,143,200,235,261,262,348,349,353,365,380,401,463

VERIFICATION SUMMARY
PATENT APPLICATION: **US/10/531,844**

DATE: 04/27/2005
TIME: 14:38:37

Input Set : **A:\PTO.SR.txt**
Output Set: **N:\CRF4\04272005\J531844.raw**

```
L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:80 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
M:341 Repeated in SeqNo=1
L:277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:192
M:341 Repeated in SeqNo=2
L:393 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
M:341 Repeated in SeqNo=3
L:588 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:64
M:341 Repeated in SeqNo=4
```